

# **Management and Evolution:**

## **Towards understanding strategic developments in public administrations**

Paper presented at the PMRA Conference 2007

Tucson, October 25-27, 2007

Kuno Schedler and Alexandra Collm

University of St.Gallen

Dufourstrasse 40a, 9000 St.Gallen, Switzerland

Phone: +41 71 224 73 45

Fax: +41 71 224 25 36

kuno.schedler@unisg.ch

alexandra.collm@unisg.ch

### **Abstract:**

Although a lot has been published on the relevance of strategies in the public sector, only little research has been accomplished so far regarding strategy and strategic development as well as the associated development processes. This paper examines how strategic development actually develops in public administrations and what is needed for the development process. Furthermore, we question what role explicit strategies really play for the strategic development in specific contextual settings. With the example of IT-strategies on the state and municipal level in Switzerland we show how strategic management has been achieved by management (top down) and evolution (bottom up).

Based on results of a quantitative analysis concerning the e-government development in Switzerland, we will show that the process of IT-strategy development should be understood using a holistic concept of strategic management that integrates both strategic top-down and capability based but bottom-up directed factors. We discuss strategic developments in public administrations as the result of a constructive interaction of these two facets of change.

## **Introduction**

Following Whittington (2007) strategy is not only something an organization has but people do. Since the literature on strategy and strategic management is numerous so are the definitions of strategy. Strategies in general have been described as a way in which managers try to simplify and order a world which is too complex and too chaotic for them to comprehend (Whittington, 1993). Since we acknowledge the multiple dimensions of strategy with its different approaches concerning e.g. ownership, scope or processes one-sided definitions will not be used here (Feurer and Chaharbaghi, 1995). According to Mintzberg (1978) we see strategy as a sequence of top managerial decisions exhibiting a consistency or pattern over time. This broad definition allows for a wide range of concepts for strategy to be taken into account when studying strategy.

Mintzberg und McHugh (1985) state that strategies in the public sector are too often equated with planning and a deliberated articulation of policies which are realized after being formulated. In their opinion, strategy should not only be seen as a constant but as a development process which is shaped by individuals and realizes a dynamic alignment and design of all the organizational activities.

Following up this definition it can be resumed that the concepts of strategic management and strategic change are interlinked by now. The first strategic management publications differentiate between strategy as a static plan on the one side and the implementation as mode of governance on the other side. Current publication rarely divide strategic management and strategic change integrating both sides into a circular development process of strategy (Zan and Zambon, 1992).

Fifteen years ago, Pettigrew (1992) stated for the private sector that research in strategy content was already established and well-known whereas research on the strategy process was still in its infancy. What was true for the private sector then still holds true for the public sector today. Only little academic research has been seen especially on how different types of managerial activities and actors influence the strategy development process (Regnér, 2003). In this paper we are directing the attention on the actual activities and actors involved in the development process of strategies in the public sector. In our understanding strategic management is directed towards the success-oriented shaping of an organisation's long-term development which is about the initiation, formulation, and implementation of strategy (Schedler and Siegel, 2005). It can be summarized that strategic management in the public sector is concerned with the strengthening of long-term viability and effectiveness of public organizations (Poister and Streib, 1999).

## **Strategic Change**

Regarding the different strategic management concepts which have developed during the last years Zan and Zambon (1992: 4) argue that it appears more appropriate to talk about strategic change rather than strategy in order to emphasize the "multiplicity of aspects and intentions of a generic process of change". Since strategic change deals with topics and problems that are important to the survival of the organization more attention has to be paid to strategic management concepts which take organizational and personal competencies into account (Van de Ven, 1993).

By overwhelming organizational processes and individual resistance e-government leads to organizational change and can be equated with administrative reform (Schwiering, 2005). The decisions about the use of IT are mostly made by top managers. Still, the use of IT and the organizational change are accomplished in an incremental way (Norris, 2006). Therefore, e-government has to be seen as a cross-organizational approach of administrative reform influenced by the dynamic development of IT

Recent research work at our institute confirms the concepts of Johnson et al., (2003) and Mintzberg and McHugh (1985) stating that formulated e-government strategies are not always realized as intended and therefore have a narrowed impact (Schedler and Schmidt, 2003; Summermatter, 2006). Our assumption is that deliberate strategies for the use of IT differ from the strategies which are finally realized. From our point of view the realized strategy depends on the design of the strategy development process and its organizational and technological context influencing its direction. Therefore, we assume that the existence of a formulated strategy is less meaningful than how the process was implemented and who was involved.

We see the necessity to do more research on the strategy and the strategic development in public administrations. Important questions to be answered are: Do certain capabilities for change matter? Do explicit strategies matter for the development of administrations? What relations exist between explicit strategies and organizational capabilities?

This paper explores how strategies develop in public administrations and to what extent they have an influence on the organizational results of the respective administrations. Based on a comprehensive literature review and the results of the studies described above we will look at strategies as development processes shaped by specific actors in a situational context. Using data from our broad quantitative study on the development of e-government in Switzerland (Schedler et al., 2007) we will examine driving factors for the strategic change competencies of an administration. We argue that a mix of types of capabilities should be considered for public administrations, rather than one single ideal type. Our dataset contains a total of 577 cases, investigated in 2006. 201 cases are on the cantonal (state) whereas 376 cases are on municipal level which allows significant analysis including two different federal levels.

Two main questions are decisive for the empirical part of the paper. Firstly, we focus on the administrations' capabilities for strategic change and link them to the outcome which has been achieved using information technology in the public sector. Secondly, we show the importance of managerial competence and analyze the impact of an explicit strategy for information technology on the outcome. The paper closes presenting possible conclusions both for research and for practical use.

## **Strategy development and strategic developments**

In this paper, we distinguish strategic developments from strategy development. Strategic developments occur when a new set of organizational routines is being established with a long-term impact on the organization, its functioning, or its outputs and outcomes. Strategy development is the way a new pattern of managerial decisions is being created. In an ideal case, strategy development leads to strategic developments within an administration.

In order to make the vast variety of strategy concepts operational we follow Idenburg (1993) by using a continuum of four different types: rational planning, logical incrementalism, guided learning, and emerging strategies.

*Rational Planning* can be understood as the development of strategy through formal planning or rational processes (Price and Newson, 2003; Hutchinson, 2001). Mintzberg (1994) adds that strategic planning is an analytical process concerned with programming. In this approach it is assumed that people act accordingly in a structured and rational manner. Many authors see strategic planning as the core element of strategic management (e.g. Vinzant and Vinzant, 1996; Poister and Streib, 1999; Steiss, 1985).

*Logical Incrementalism* recognizes strategic planning as one building block of the strategy development process and thus comprises both goal and process orientation (Idenburg, 1993). Strategies develop as “continuous, evolving political consensus-building processes with no precise beginning or end” (Quinn, 1980: 205). According to Quinn (1980: 15) the full strategy is rarely written down in any one place due to the fact that the development process is typically fragmented, evolutionary, and largely intuitive. There remains the idea, however, that strategies are developed by some leading body (in our context, politics would be the according body). Consequently, leadership acknowledges that management is not only about goal setting but also steering people (Idenburg, 1993).

Similar to the logical incrementalism approach the *guided learning* approach presumes that external and internal environmental factors are not foreseeable. Therefore, organisations have to be able to learn quickly in order to adapt to a changing environment (Idenburg, 1993). Deriving from research fields like organizational learning and organizational behaviour the guided learning approach emphasizes the role of routines and abilities when managing the strategy development process. According to Bessant et al. (1996) strategic capabilities can be formed over time and with continuous effort when embedding a pattern of behaviours in such a way that they become routines. In the sense of the guided learning approach strategy development is a never ending process of continuous adaptation and improvement (Idenburg, 1993), and it is the managers' task to encourage these processes.

Mintzberg (1978) and others made the concept of *emerging strategies* popular. By this they integrated strategic developments, which evolved even though they were not intended by the top management, into the debate on strategy development. Therefore, the nature of the strategy development process is “to react in a flexible, opportunistic and accidental manner to new, unpredictable developments, and ‘muddle through’” (Idenburg, 1993: 136).

Out of the strategic concepts described above, formal strategies in the shape of rational strategic planning are most widely diffused in the public sector (Ferlie, 2002; Llewellyn and Tappin, 2003; Poister and Streib, 1999). The great interest for strategic planning may derive from the opportunity given to public managers to deploy strategy in control measures and to shape strategy according to managerial needs. Politicians see in turn their chance to have more influence on the professionals via the managerial level (Llewellyn and Tappin, 2003). It is, however, also a result of the existing administrative culture which is driven by hierarchical accountability structures combined with a necessity and desire to (democratically) control the administration. The normative (and often contra factual) reaction of politicians and public managers is therefore often favouring top-down models of rational strategy development.

Even though rational process models have clear advantages in more stable environments or within a bureaucratic structure, this does not mean strategic planning is best suited to public organisations in general (Hutchinson, 2001). Guha et al. (1997) combine the different views into a holistic concept. Following their argumentation strategic change begins with the initiation of the process by the top-management. The further development process is characterized by an incremental and informal approach based on learning processes. The initiation

of the process is therefore only one relevant factor for accomplishing strategic change. Other important factors include: the culture of the organization, learning capacity to learn and adapt of the people involved, exchange of information and knowledge, degree of adaptation to external and internal conditions as well as the internal role of IT.

Roberts and Menker (2000) argue similarly that the top-management level in public organizations is needed for the initiation of the strategy change process. Still, in order to accomplish the vision articulated by the top-management it needs to fit the organizational's internal capacity such as human resources, structure, and technology. Regarding the top-management level as the one in charge of the management of resources and competencies leads to newer concepts such as the competence based view (Ferlie, 2002; Zahn et al., 2000).

Distinctive competencies are competencies that are very difficult for others to replicate and therefore are a source of enduring advantage (Bryson et al., 2007). Whereas a single resource or capability would be easier to identify, strategic change evolves from a complex pattern of coordination between many actors and diverse resources which in turn makes it difficult to imitate (Hart and Banbury, 1994; Winter, 1987).

In competence based research, not only resources and capabilities are taken into consideration but also the way they are adopted. The focus lies on the competence in using these resources and capabilities to fulfil the strategic tasks, which defines the role of management as a creator of competence. The competencies needed require a constant improvement by means of continuous learning processes (Zahn et al., 2000).

In our own terminology, strategic developments are long-term changes observable within an organisation. They will include *inter alia* a shift of resources and capabilities and their adoption, whereas strategy development will focus on the way these changes are created.

Following De Wit and Meyer (2001) we distinguish the development of strategies into the three dimensions process, content, and context. The strategy process is defined as the "manner in which strategies come about" and focuses on the how, who, and when of strategy. In contrast the strategy content focuses on the 'what' of strategy and is defined as the product of the strategy process. Finally, the strategy context is concerned with the 'where' of strategy and the organizational and environmental circumstances influencing the strategy process as well as the strategy content. (De Wit and Meyer, 2001: 5) The context according to Hutchinson (2001) can be further distinguished into an internal dimension comprising resources, capabilities, and culture as well as an external dimension including political, social, and economic factors. Following the differentiation of Hutchinson (2001) strategy development in the public sector is concentrating more on the content, process, and internal context rather than on the external context of strategy. As has been stated, all three views are complementary.

According to our observations and interview results in previous studies we expect that strategy development in the public sector needs rational as well as incremental elements especially with regard to IT needs. Information technology can be a good source for increased efficiency and effectiveness if (centrally) designed properly and (decentrally) used cleverly.

Therefore, it is not only about strategy, but also about the competence of the organization to implement strategic changes by using the organizations' capabilities. The next chapter will therefore set light on organizational capabilities in the context of strategic developments.

## Organizational Competencies for strategic developments

Hamel and Prahalad (1994) describe any organization as a portfolio of competencies. Additionally, Duncan et al. (1998) state that strategic managers need to understand what the organizational capabilities and resources are and how they contribute to the organization's position. Hamel and Prahalad (1994: 202) define competencies as a bundle of skills and technologies rather than a single, discrete skill or technology. Following this argumentation resources do not create a value inherently. Competence is defined here as the capacity of an organization to effect a desired end using organizational processes (Amit and Schoemaker, 1993: 35).

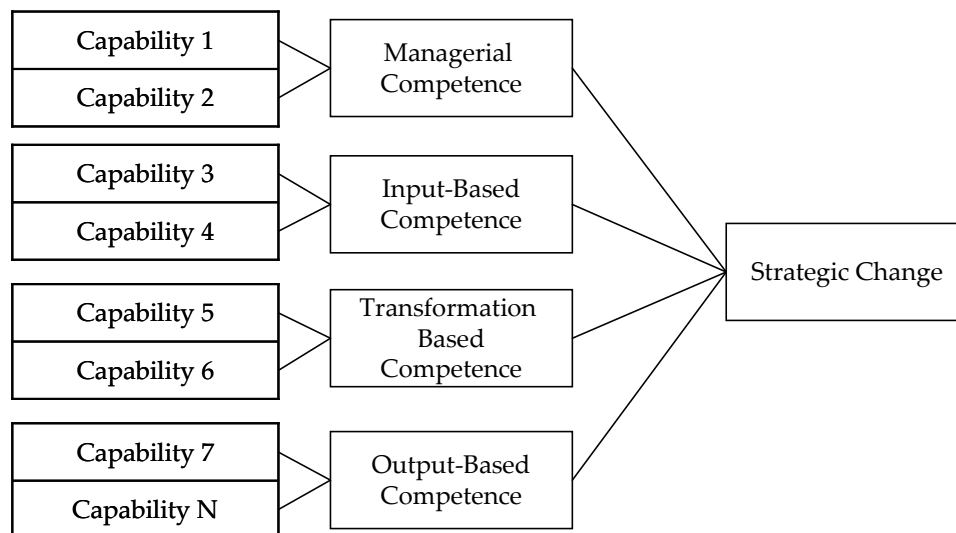
Information technology has been discovered to be of strategic importance for the public administration due to its function as a driver for strategy and an enabler of organizational change (Schedler and Scharf, 2001). In addition, IT is a major resource which creates organizational capabilities (Fountain, 2001). Since the nineties, strategy and organizational rethinking have become continuous in management and have not left the public sector unimpressed (Fenton and Pettigrew, 2000). In this changing environment, the different resources and capabilities of public sector organizations have become relevant in order to adapt. With the increasing strategic relevance of IT the need for e-government strategies was getting prominent since e-government aims at the implementation of IT in government and politics (Schedler et al. 2004). Explicit e-government strategies are still seen mainly as functional strategies and, therefore, as a part of organizational or business strategies. However, unlike functional strategies for particular departments the use of IT affects the whole organization and its processes, influenced by the dynamic development of IT and leading to organizational change. (Schwiering, 2005)

Since IT is seen as an enabler of change and strategic management can not be divided from strategic change, many authors combine research from strategic management with research from information systems (IS) in order to extract the capabilities needed. Bharadwaj (2000: 186) notes that a capability concerning the use of IT "is not so much a specific set of sophisticated technological functionalities as it is an enterprise-wide capability to leverage technology to differentiate from competition". Following this definition Peppard and Ward (2004: 182) add that a IT-capability is "what the business can achieve through focused investment and deployment of competencies". Competencies in turn are the "abilities of the organization to develop, mobilize and use resources" whereas "resources are what an organization has under its control or at its disposal". Thus according to Peppard and Ward (2004) the strategic management of IT is about developing IT-competencies using organizational capabilities. In turn IT-competencies act as an enabler of strategic change (Krcmar, 2000)

Still it remains unclear what organizational capabilities are needed for the development of IT competencies and thus strategic change by the use of IT.

Mata et al., (1995) identified capital requirements, proprietary technology, and technical IT skills as less strategic relevant capabilities. In contrary IT-related managerial skills were found to be crucial. Pettigrew et al. (1992) identified local leadership and a supporting managerial subculture as major success factors for strategic change. In comparison to the private sector public managers have a special role to play since they are responsible for purposes which are politically acceptable as well as operationally feasible: The public organization has to attract permission and resources from the authorising environment and needs to achieve internal and external capabilities (Idenburg, 1993). With the strategic planning approach dominating in the public sector it is believed that successful strategic management needs a strong leadership in the public sector creating organizational visions and managing organizational changes. (Krcmar and Reb, 2000) therefore call for a strategic IT-competence of public managers in order to develop strategic visions on the occasion of new developments. However, strategy development has shifted in the course of managerial reforms since the 1990s: Responsibility is more and more decentralized to line managers. Strategic IT-

**Figure 1: Model of strategic change according to Lado and Wilson (1994)**



Source: According to Lado and Wilson (1994)

competence thus needs to exist not only on the top-management but also on the level of line managers and employees from IT-departments (Pietsch et al., 1998: 142).

Lado and Wilson (1994) presented a holistic set of competencies as crucial for strategic change reflecting the competency-based perspective (see figure 1). They similarly identified strategic competencies in terms of several capabilities such as articulating and communicating a strategic vision and empowering organizational members for its realization. Beyond the so-called managerial competence they identified input-based competence, transformational competence as well as output-based competence. According to Lado and Wilson (1994), input-based competence includes physical resources, financial resources, human resources, knowledge, and skills. While transformational competence is required for the conversion of inputs into outputs and include capabilities such as the organizational culture and the level of organizational learning, invisible strategic assets such as corporate reputation or image are assigned to output-based competence.

In the empirical part we will analyse the organizational capabilities leading towards managerial, input-based, transformational, and output-based competence, using the Lado and Wilson model as a frame of reference.

## **Methodology**

In this paper we assume that the IT-strategy development process does not depend on its initiation but its process design. Whether it has been initiated top-down or bottom-up is less meaningful than how the process was implemented and who was involved. In the following we demonstrate which capabilities and competencies have the most influence on strategic development. Analyzing correlations between the organizations' change capabilities and its competencies leads us to the question if an explicit strategy matters for strategic development. Our assumption is that managerial competence matters regarding the development of a whole set of capabilities for strategic development.

In order to explore our research questions we have used data from our broad quantitative study measuring the state of development of e-government in Switzerland called 'Electronic Government Barometer'. We regard the survey as adequate for the analysis accomplished here because we define e-government as a "form of organization of the state that integrates the interactions and the interrelations between state and citizens, private businesses, customers, and public institutions through the deployment of modern information and communication technologies" (Schedler et al., 2004). Questions from the survey which are interrelated with strategy and the use of IT are thus of great value for illuminating our assumption.

In the primary survey we included public sector organisations from all three national levels (federal, state and municipal) in Switzerland. The survey does not limit itself to the provision of E-Government services in Switzerland but also addresses the question of how the management of E-Government takes place in the administrations. Finally, it relates the development with external context factors such as politics and law.

The questions of the survey focus on the process, content, and context concerning the use of IT in the public sector. The size of our dataset allows significant conclusions of important questions to our research subject. We are focussing here on two different federal levels from the survey, the municipal and the cantonal level, since their organizational structure and motives for e-government differ. Our dataset contains a total of 577 cases, investigated in 2006. 201 cases are on the state/cantonal whereas 376 cases are on municipal level.

The overall results of the survey confirm earlier findings that strategic developments in the context of e-government are generally not limited by technology but by the ability to connect new technologies to the organizational context (Schedler and Schmidt, 2003). Hence, factors like leadership and acceptance by employees are crucial for the use of IT in the public sector organizations.

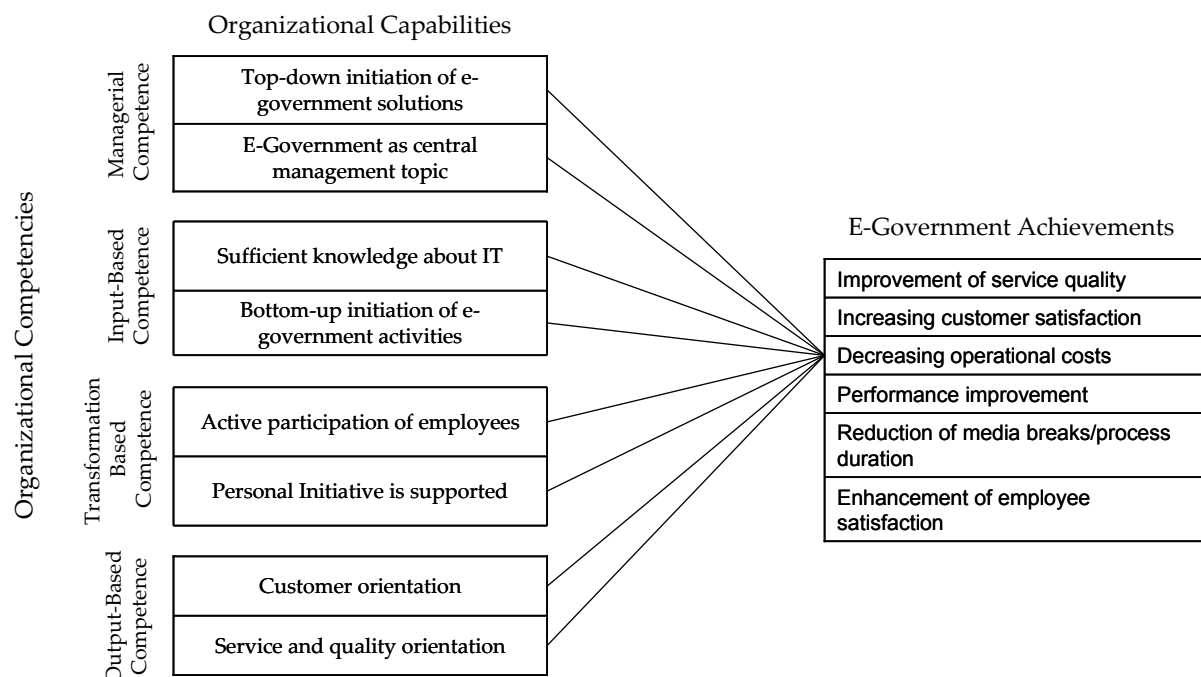
Of particular interest here, however, are the links between the different factors displayed in the model above. The results of the study are useful to specify the influence different factors have on the use of IT and on the achievements related to this use. According to former results of our survey and the literature review described above we expect a high significance of leadership and the actors involved.

## What matters for strategic development?

As indicated above, we expected strategic developments to be initiated most successfully by a mix of an explicit, rational strategy and the capability of public administrations to implement change. As has been shown elsewhere, the improved E-Government development are seen as a result of both mimetic behaviour and a reaction to customer needs - most often, however, it is an indicator for the importance administrators give to these services and the benefits they expect from implementing online transactions (Schedler and Summermatter, 2007).

In order to analyze what matters for strategic development we used the model of Lado and Wilson (1994). On the basis of this model we identified eight variables. These eight variables represent eight capabilities which were chosen due to their explanatory power of the

**Figure 2: Organizational Competencies and Capabilities of Strategic Development**



Source: According to Lado and Wilson (1994)

four types of organizational competencies and because of their similarity to the capabilities selected by Lado and Wilson. Following this procedure we analyzed the impact the different variables have on six outcome variables. The outcome reflects different dimensions of improvement by the use of IT or rather e-government activities in the public administrations such as customer and employee satisfaction as well as service quality and process duration. All 14 variables were subject of the e-government barometer survey in 2006. The results we obtained are significant regarding the correlation between the eight variables and the outcome.

In the table below the outcome variables 'reduction of media breaks/process duration', 'decreasing operational costs', 'improvement of service quality', 'increasing customer satis-

faction', 'performance improvement', and 'enhancement of employee satisfaction' are codified from y1 to y6 in order to ensure clarity in the following tables.

E-Government Outcome Variables	
Reduction of media breaks/process duration	y1
Decreasing operational costs	y2
Improvement of service quality	y3
Increasing customer satisfaction	y4
Performance improvement	y5
Enhancement of employee satisfaction	y6

**Table 1: codification of outcome variables**

The first variable 'top-down initiation of e-government solutions' shows a high correlation with all outcome variables. These results are similar on the state level as well as on the municipal level. Guha et al. (1997) assume that a strategic initiative where top-manager act as leaders is required for the change process. Especially the definition and communication of visions are important functions of the top-management.

Top-down initiation of e-government solutions	y1	y2	y3	y4	y5	y6
State level	,157(**)	,162(**)	,200(**)	,230(**)	,232(**)	,216(**)
Municipal level	,166(**)	,140(**)	,259(**)	,318(**)	,281(**)	,185(**)

**Table 2: Correlation top-down initiation of e-government solutions, N(S): 201, N(M):376. \*\* for p <= 0.01; \* for p <= 0.05.**

The second variable belonging to the managerial competence is the appraisal that 'e-government is a central management topic'. Similar to the first variable of the managerial competence the results show continuous high correlations between this variable and the outcome variables. Furthermore, these strong correlations are once more on both federal levels.

E-Government as central management topic	y1	y2	y3	y4	y5	y6
State level	,341(**)	,327(**)	,357(**)	,300(**)	,389(**)	,351(**)
Municipal level	,302(**)	,274(**)	,331(**)	,376(**)	,343(**)	,317(**)

**Table 3: Correlation E-Government as central management topic, N(S): 201, N(M):376. \*\* for p <= 0.01; \* for p <= 0.05.**

Therefore, it can be resumed that both capabilities belonging to the managerial competence show a high correlation with the outcome variables. Furthermore, between both variables there are strong correlations as well assuming that the more the top-management re-

gards e-government as a central management topic the more e-government solutions are introduced top-down and vice versa. The overall assumption is that managerial competence have a great impact on the strategic development process and its results.

The following variable is the one which is least distinct. On both levels state as well as municipal the variable 'sufficient knowledge about IT' does not correlate with most of the outcome variables. Only the outcome variable 'enhancement of employee satisfaction' shows a correlation on both levels. However, the correlation is only on the state level strong whereas the municipal level shows a weaker correlation. On municipal level there is also a weak correlation noticeable regarding the variable 'increasing customer satisfaction'.

It seems to be comprehensible that employees are more satisfied if they can handle new IT which is introduced within e-government projects. The correlation with the increased customer satisfaction might result e.g. from the speed government employees process requests.

Sufficient knowledge about IT	y1	y2	y3	y4	y5	y6
State level	,057	,066	,013	-,007	,094	,152(**)
Municipal level	,017	,010	,055	,093(*)	,065	,091(*)

**Table 4: Correlation Sufficient knowledge about IT, N(S): 201, N(M):376. \*\* for  $p \leq 0.01$ ; \* for  $p \leq 0.05$**

Another input-based capability analysed is the variable 'bottom-up initiation of e-government activities'. Unlike the results of the variable introduced before this variable shows a strong correlation with all six outcome variables. On both levels state as well as cantonal level the initiation of e-government activities by employees seems to have a great impact on the outcome.

Bottom-up initiation of e-government activities	y1	y2	y3	y4	y5	y6
State level	,230(**)	,305(**)	,272(**)	,209(**)	,260(**)	,212(**)
Municipal level	,174(**)	,180(**)	,263(**)	,248(**)	,188(**)	,267(**)

**Table 5: Correlation Bottom-up initiation of e-government activities, N(S): 201, N(M):376 \*\* for  $p \leq 0.01$ ; \* for  $p \leq 0.05$ .**

The results of the input-based competence are very heterogeneous in comparison to the managerial competence. Between both capabilities a strong correlation is noticeable leading to the assumption that the more activities are initiated by the employees the more they know about IT and vice versa.

Active participation of employees	y1	y2	y3	y4	y5	y6
State level	,239(**)	,207(**)	,259(**)	,194(**)	,240(**)	,328(**)
Municipal level	,185(**)	,229(**)	,215(**)	,181(**)	,212(**)	,252(**)

**Table 6: Correlation Active participation of employees, N(S): 201, N(M):376. \*\* for  $p \leq 0.01$ ; \* for  $p \leq 0.05$ .**

The first variable of the transformation-based competence showing the ‘active participation of employees’ correlates just as strong with the outcome as the bottom-up initiation of e-government activities. In contrast, the variable ‘personal initiative is supported’ does not correlate with all outcome variables. On neither the cantonal nor the municipal level the variable correlates with the reduction of media breaks/process duration. Whereas on both levels a high correlation exists between the variable and the enhancement of employee satisfaction, so the impact of the variable is different regarding the remaining variables. In total the correlations are stronger on municipal level. Thus, the variables ‘improvement of service quality’ ‘increasing customer satisfaction’, and ‘performance improvement’ show strong correlations on municipal level but weaker correlations on state level. Whilst the ‘variable decreasing operational costs’ shows a strong correlation with the outcome variables on state level it is weaker on municipal level.

Personal Initiative is supported	y1	y2	y3	y4	y5	y6
State level	,065	,143(**)	,119(*)	,100(*)	,100(*)	,168(**)
Municipal level	,053	,086(*)	,142(**)	,160(**)	,141(**)	,150(**)

**Table 7: Correlation Personal Initiative is supported, N(S): 201, N(M):376. \*\* for  $p \leq 0.01$ ; \* for  $p \leq 0.05$ .**

Whereas strong correlations exist between the variable ‘active participation of employees’ and the input-based capabilities as well as the second transformation-based variable, correlations exist also with the managerial capabilities introduced before. Therefore, the active integration of employees into the change process seems to be of central importance.

Customer orientation	y1	y2	y3	y4	y5	y6
State level	,203(**)	,183(**)	,240(**)	,302(**)	,306(**)	,225(**)
Municipal level	,141(**)	,071	,278(**)	,327(**)	,264(**)	,172(**)

**Table 8: Correlation Customer orientation, N(S): 201, N(M):376. \*\* for  $p \leq 0.01$ ; \* for  $p \leq 0.05$ .**

The output-based competence shows almost the same strong correlation on both federal levels. The only exception is the missing correlation between the variables ‘customer orienta-

tion' as well as 'service and quality orientation' and the outcome variable 'decreasing operational costs' on municipal level. It is questionable why both variables correlate with the outcome variable 'reduction of media breaks/process duration' but does not correlate with the reduction of operational costs.

Service and quality orientation	y1	y2	y3	Y4	y5	y6
State level	,287(**)	,201(**)	,318(**)	,273(**)	,273(**)	,255(**)
Municipal level	,104(**)	,056	,228(**)	,267(**)	,224(**)	,145(**)

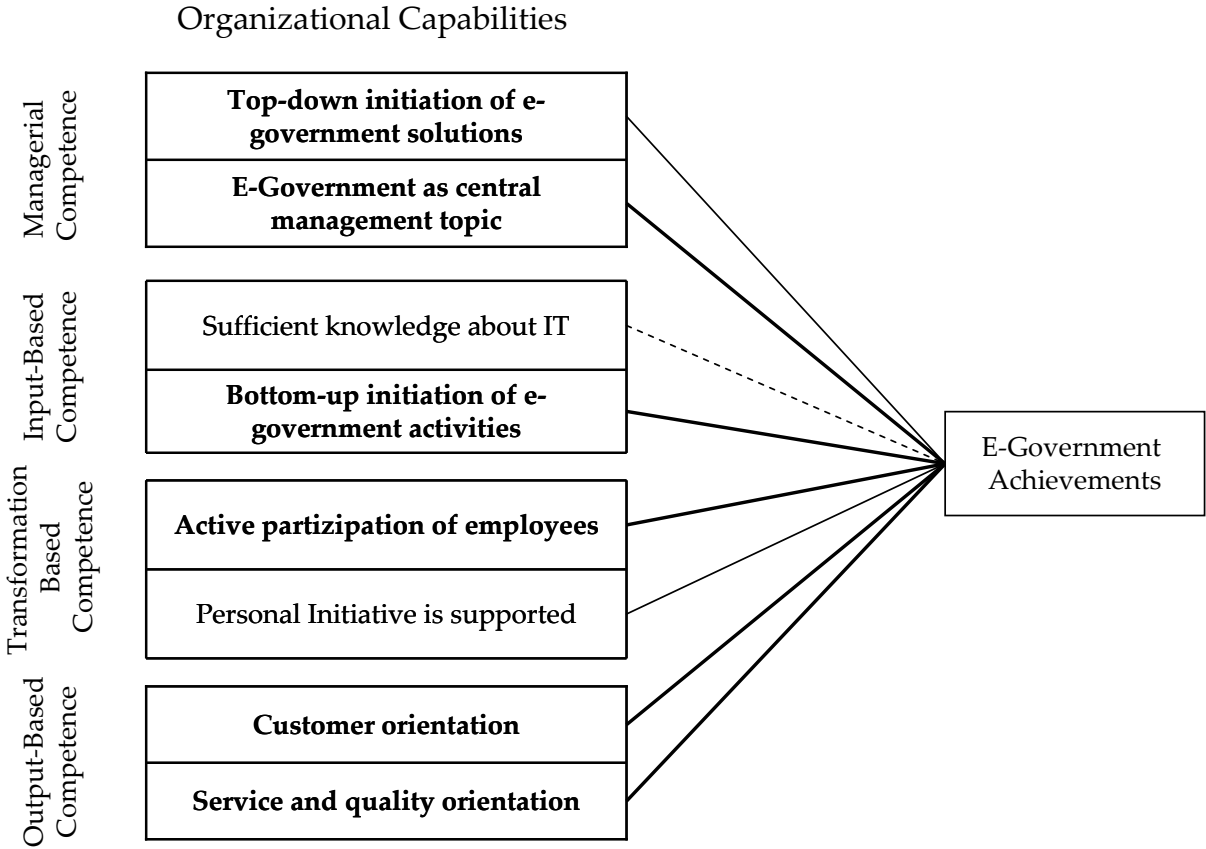
**Table 9: Correlation Service and quality orientation, N(S): 201, N(M):376 \*\* for  $p \leq 0.01$ ; \* for  $p \leq 0.05$**

Furthermore, the orientation towards visions and overall goals like 'customer orientation' or 'service and quality orientation' strongly correlates with the managerial competence leading to the assumption that the more managerial capabilities are influencing the strategic development process the more strategic visions like 'customer orientation' exist.

Turning towards the overall analysis of the results it can be resumed that on the municipal level the capabilities which show the highest correlation with the outcome variables are the following: top-down initiation of e-government solutions, e-government as central management topic, bottom-up initiation of e-government activities, and active participation of employees during the change process. All of these variables correlate by the level of significance  $p \leq 0.01$  with all outcome variables. The variables customer orientation as well as service and quality orientation correlate only somewhat less with the outcome variables. Supporting personal initiative shows only no correlation with the two variables decreasing operational costs and the reduction of media breaks. The variable showing the least correlation with the outcome variables is sufficient knowledge of the employees about IT. This variable correlates only with the variables increasing customer satisfaction and enhancement of employee satisfaction.

On the cantonal level we obtained similar results like on the municipal level. The capabilities which show the highest correlation with the outcome variables are the following: top-down initiation of e-government solutions, e-government as central management topic, bottom-up initiation of e-government activities, and active participation of employees during the change process. Unlike the municipal level the variables customer orientation as well as service and quality orientation correlate by the level of significance  $p \leq 0.01$  with all outcome variables. Supporting personal initiative shows only no correlation with the two variables increasing customer satisfaction and the reduction of media breaks. The variable showing the least correlation with the outcome variables is sufficient knowledge of the employees about IT. This variable correlates only with the variable enhancement of employee satisfaction.

**Figure 3: Organizational Competencies and Capabilities of Strategic Development**



Source: Own Illustration

As it has been summarized in the figure above, managerial competence shows the strongest correlations with the outcome variables followed by the output-based competence where the correlation was on the municipal level somewhat less distinctive. The transformation based competence as well as the input-based competence have weaker correlations with the outcome variables.

**The role of explicit strategies**

First of all, the sample showed that only a minority of administrations reported they had an explicit strategy for electronic government. At the cantonal level, it is 27.2 percent, and at the municipal level it is 9.5 percent.

Since managerial competence, comprising of the two variables 'top-down initiation of e-government solutions' and 'e-government as central management topic', shows strong correlations the question arises what influence an explicit strategy has on the outcome variables. Therefore, we have analysed the variable 'our public organization has an e-government strategy' which was also contained in the survey accomplished and its correlations with the six outcome variables. The results show a strong negative correlation between the variable 'strategy' and the outcome variables. The only exception is the outcome variable 'decreasing operational costs' on cantonal level where no correlation to the variable 'strategy' can be shown.

	Existence of an explicit strategy
Improvement of service quality	<b>-.211**</b>
Increasing customer satisfaction	<b>-.178**</b>
Decreasing operational costs	<b>-.197**</b>
Performance improvement	<b>-.152**</b>
Reduction of media breaks/process duration	<b>-.160**</b>
Enhancement of employee satisfaction	<b>-.192**</b>

**Table 10: The role of strategies on cantonal level. \*\* for  $p \leq 0.01$ , N=201**

These findings lead to the assumption that other factors than strategy as it has been shown before with the correlation between organizational capabilities and outcome variables are important for strategic development. This assumption is emphasized when analyzing cantonal offices or municipalities with and without strategies. Cantonal offices and municipalities show stronger correlations between the eight capabilities and the outcome variables than cantonal offices or municipalities with explicit e-government strategies.

	Existence of an explicit strategy
Improvement of service quality	<b>-.156**</b>
Increasing customer satisfaction	<b>-.206**</b>
Decreasing operational costs	<b>-.032</b>
Performance improvement	<b>-.244**</b>
Reduction of media breaks/process duration	<b>-.157**</b>
Enhancement of employee satisfaction	<b>-.099**</b>

**Table 11: The role of strategies on municipal level. \*\* for  $p \leq 0.01$ , N=376**

In order to explain these findings we turn towards the capabilities analysed and interpret the correlations between strategy and the organizational capabilities and their influence on the outcome variables. The analysis of the correlations between the variable 'existence of an explicit strategy' and the organizational capabilities results in the identification of negative correlations with the variables 'top-down initiation of e-government solutions', 'e-government as central management topic', 'active participation of employees', 'personal initiative is supported', 'customer orientation' as well as 'service and quality orientation' whereas no correlations exist with the remaining variables.

As it has been stated before, most of these variables, with the exception of the variable 'personal initiative is supported', show very strong positive correlations with all outcome variables. Therefore, it can be assumed that the existence of a strategy could interfere with the impact organizational capabilities might have on the outcome.

Strategy	Top-down initiation	Central management topic	Participation of employees	Support of personal initiative	Customer Orientation	Service and quality orientation
State level	-,308(**)	-,321(**)	-,171(**)	-,171(**)	-,139(**)	-,093
Municipal level	-,233(**)	-,344	-,100(**)	-,069	-,270(**)	-,175(**)

**Table 12: Correlation Strategy and Organizational Capabilities, N(S): 201, N(M):376 \*\* for  $p \leq 0.01$ ; \* for  $p \leq 0.05$**

The analysis of the correlations made on cantonal and municipal level show that in most cases e-government is a central management topic and that e-government solutions are mainly initiated top-down whereas the bottom-up initiation of e-government activities is as important. Whereas explicit strategies can interfere with the impact of organizational capabilities the creation of visions and objectives such as customer orientation or service and quality orientation on the part of the top-management is still important. Further management responsibilities are the integration of employees into the change process and the support of personal initiatives.

Managerial competence therefore stays important for strategy and strategic development independently from an explicit strategy. The authors assume that the upcoming survey in 2008 will approve these findings in comparison with the results from the 2006 survey.

## Discussion

In this paper, we have differentiated between strategy development and strategic developments. We used this difference to look into two main questions: Firstly, we focused on the administration's capabilities for strategic change and linked them to outcomes which have been achieved using IT. Secondly, we were looking at the importance of managerial competence and analysed the impact of an explicit strategy for IT on its outcome. As a framework, we used Indenburg's (1993) four types of strategy development and Lado and Wilson's (1994) competence based model of strategic change. In the following, we will discuss our findings that showed a large degree of expected results, but also some surprising elements.

In the context of the introduction of IT solutions into the public administration (electronic government), successful *strategy development* has been described as a competence building process led by the management and integrating all four relevant elements of competencies. This goes in line with earlier findings focussing on the administration's fitness for e-government (Schedler and Schmidt 2004). It has also been shown that strategies develop in a contingent process depending on contextual factors such as, here, the availability of technological solutions for problems to be solved. Not rarely, strategy development seemed to be a re-active rather than an active process.

*Strategic developments*, on the other hand, that lead to significant changes in the outcome of IT reforms, have been recognised to be a result of the matching of opportunities created by new IT solutions with the capabilities available within the organization. We found that IT is a highly dynamic market for solutions, in which strategies have to be implemented by a visible and strong management rather than formalized top-down objectives. The organization needs to be able to re-act to these opportunities, which again leads to the competence based view of strategic management. In this perspective, strategic developments are happening in the triangle of resource dynamics, organizational competence, and re-active strategy development.

Our data suggest that all four types of organizational competencies proposed by Lado and Wilson have a direct impact on the outcome of e-government reforms. However, they differ in their relevance: Managerial competence as well as output-based competence has proven to be highly influential for e-government outcomes. Transformation-based competencies are less influential, and the least seems to be input-based competencies, mostly due to little correlation of one factor, 'sufficient knowledge about IT'. This takes us to the conclusion that administrators seem to react mostly to both active and visible management, and the cultural challenge of customer and service orientation. It also makes clear that for strategic developments to happen, it requires a broad approach of competence building within the public administration.

Interestingly enough, there is no clear pattern of difference to be observed between the state and the municipal level, concerning the correlation of competencies and e-government outcomes. It is assumed that factors like different levels of autonomy - municipalities decide on their own, cantonal offices may be dependent on an over-all cantonal IT strategy - do not have a major impact on the importance of competencies for strategic developments.

When comparing single organizational capabilities, to have sufficient knowledge about IT correlates the least with achieved outcomes, significantly only with the enhancement of employee satisfaction. We conclude that in the context of IT, the existing knowledge is less relevant as IT is often implemented by specialists and/or external consultants with specific know-how. This seems to be a competence that can be bought in, while others such as the

bottom-up initiation of e-government activities or the active participation of employees are crucial facts in organizational capabilities that need to be developed over time.

As an over-all conclusion, our data suggest that for the development of e-government (and, we would expect, other reform policies with similar dynamics) technology is the driving factor rather than the explicit strategy itself. If strategic management is mainly re-acting to new opportunities, rational planning as a hierarchical way of strategy development seems to be in an inferior position related to more participative approaches. We believe that in many communities, IT strategies are evolving strategies in the sense of Mintzberg. Consequently, strategies cannot be seen as a constant of the organisation. Rather, they have to be interpreted as a routine of managerial action that can and will change depending on the context in which they have been constructed. So far, our data seem to support our expectations.

The negative correlation between an explicit strategy and the outcomes of e-government reforms, however, was surprising for us. We had expected that in a bureaucratic culture of command and control, top-down strategies would have a significantly positive effect on the development of any reform project. Even if there was not such a dominant culture of control and command, legitimizing change was expected to happen more effectively through explicit strategies. We have had a longitudinal set of data since 2002 suggesting that explicit e-government strategies are not very common in Swiss public administrations (Summermatter 2006), and we intuitively expected this to be one of the reasons for the low level of development in this country.

As our data suggest now, having an explicit strategy does not only not drive e-government developments, but it seems to be a retarding factor. How should this be explained?

One possible explanation is a cultural tendency of the bureaucracy to regulate rather than manage new developments. In this scenario, explicit strategies could be a bureaucratic formalization of something that would need active involvement and leadership. If the strategy is used to replace leadership and the strengthening of organisational capabilities, it is crowding out the most important roots of strategic developments within the administration. The negative correlations between strategy and organizational capabilities seem to corroborate this thesis.

Strategy formulation as well as implementation is to be linked to power related perspectives. Actors who formulate and/or approve explicit strategies may have formal power. In the context of modern IT, however, many decision processes are decentralised. We accord with Fountain (2001) that a clear line has to be drawn between existing and enacted technology, the first being a formal and the second an actual state of technology use in an organisation. If the organisation is not willing or able to implement new technologies, formal resolutions don't succeed in promoting a reform.

Another possible explanation is based on the dynamics in the field of IT versus the static structures in the politico-administrative system. Compared to the necessities of such dynamic processes, formal decision making in the public sector is way too complex and thus slow. By the time a political consensus has been achieved over a new IT strategy, the technological environment may have changed and the strategy may be outdated.

To sum up, developing an IT strategy is affected by organisational, cultural, personal, and technological factors. Hart and Banbury (1994) were one of the first showing that strategy-

making processes are not directed by 'either/or' terms - either rational or evolutionary. The simultaneous use of multiple processes of strategy-making facilitates superior performance within particular organizational and environmental context.

Strategic management is a comparatively new practice in the public sector. There is still a lot to learn about how exactly strategies are developed and what drives strategic developments. In this paper, we have not looked at the role of politicians in this process, although we are aware that strategy development in the public sector cannot be separated from politics and political culture (Caiden, 1994). Earlier, we found that politicians play an important role as legitimizing actors for change, but they have hardly any direct impact on e-government developments. Nevertheless, public managers hinge on the reliable support of their political superiors (Schedler and Schmidt 2004). Allowing centralized subsystems to realize strategies independently is generally not attractive to politicians and superordinated organizational levels. Therefore, to allow the administration for independent strategic developments (such as found in our study) may be sign that e-government is not a politically relevant field in Switzerland, so that that politicians don't see an urgent need for control. This might explain the tendency for the more informal development process that we observe.

## References

- Amit, R. and P. J. H Schoemaker. Strategic assets and organizational rent. *Strategic Management Journal* 14, 33-46. 1993.
- Bessant, J., S. Caffyn, and J. Gilbert. Learning to manage innovation. *Technology Analysis and Strategic Management* 8[1], 59-70. 1996.
- Bharadwaj, A. A resource-based perspective on information technology and firm performance: an empirical investigation. *MIS Quarterly* 24[1], 169-196. 2000.
- Bryson, J. M., F. Ackermann, and C. Eden. Putting the Resource-Based View of Strategy and Distinctive Competencies to Work in Public Organizations. *Public Administration Review* 67[4], 702-717. 2007.
- De Wit, B and R. Meyer. *Strategy: process, content, context - An international perspective*. 2001. Minneapolis, West Publishing Co.
- Duncan, W. J., P. M. Ginter, and L. E. Swayne. Competitive advantage and internal organizational assessment. *The Academy of Management Executive* 12[3], 6-16. 1998.
- Fenton, E. M. and A. M. Pettigrew. Theoretical perspectives on new forms of organizing. Fenton, E. M. and Pettigrew, A. M. *The Innovating Organization*. 1-46. 2000.
- Ferlie, E. Quasi strategy: Strategic management in the contemporary public sector. Pettigrew, A. M., Thomas, H., and Whittington, R. *The handbook of strategy and management*. 279-298. 2002. London, Sage.
- Feurer, R. and K Chaharbaghi. Strategy development: past, present and future. *Management Decision* 33[6], 11-21. 1995.
- Fountain, J. E. *Building the Virtual State. Information Technology and Institutional Change*. 2001. Washinton, Brooking Institution Press.
- Hamel, G. and C. K. Prahalad. *Competing for the future*. 1994. Boston, Mass., Harvard Business School Press.
- Hart, S. L. and C. Banbury. How strategy-making processes can make a difference. *Strategic Management Journal* 15[4], 251-269. 1994.
- Hutchinson, J. The meaning of "strategy" for area regeneration: a review. *The International Journal of Public Sector Management* 14[3], 265-276. 2001.

- Idenburg, P. J. Four Styles of Strategy Development. *Long range planning* 26[6], 132-137. 1993.
- Johnson, G., L. Melin, and R. Whittington. *Micro Strategy and Strategising : Towards and Activity-Based View*. *Journal of Management Studies* 40[1], 3-22. 2003.
- Koteen, J. *Strategic Management in Public and Nonprofit Organizations: Thinking and Acting Strategically on Public Concerns*. 1989. New York, Praeger.
- Krcmar, H. *Informationsmanagement*. 2000. Berlin, Heidelberg, Springer.
- Krcmar, H. and M. Reb. *Informationstechnologie und strategisches Management : Überlegungen zu aktuellen Trends und Perspektiven*. Welge, M. K., Al-Laham, A., and Kajüter, P. *Praxis des Strategischen Managements : Konzepte - Erfahrungen - Perspektiven*. 425-446. 2000. Wiesbaden, Gabler. *Praxis des Strategischen Managements*.
- Lado, A. A. and M. C. Wilson. *Human Resource Systems and Sustained Competitive Advantage: A Competency-Based Perspective*. *The Academy of Management Review* 19[4], 699-727. 1994.
- Llewellyn, S. and E. Tappin. *Strategy in the Public Sector: Management in the Wilderness*. *Journal of Management Studies* 40[4], 955-982. 2003.
- Mata, F. J., W. L. Fuerst, and J. B. Barney. *Information Technology and Sustained Competitive Advantage: A Resource-Based Analysis*. *MIS Quarterly* 19[4], 487-505. 1995.
- Mintzberg, H. *Patterns in Strategy Formation*. *Management Science* 24, 934-948. 1978.
- Mintzberg, H. *The rise and fall of strategic planning*. 1994. New York, Prentice-Hall.
- Mintzberg, H. and A. Mc Hugh. *Strategy formation in an adhocracy*. *Administrative Science Quarterly* 30[160], 197. 1985.
- Peppard, J. and J. Ward. *Beyond strategic information systems: towards an IS capability*. *Journal of Strategic Information Systems* 13, 167-194. 2004.
- Pettigrew, A. M. *The Character and Significance of Strategy Process Research*. *Strategic Management Journal* 13, 5-16. 1992.
- Pietsch, T., L. Martiny, and M. Klotz. *Strategisches Informationsmanagement: Bedeutung und organisatorische Umsetzung*. 1998. Berlin, Erich Schmidt.
- Poister, T. H. and G. D. Streib. *Strategic Management in the Public Sector: Concepts, Models, and Processes*. *Public Productivity & Management Review* 22[3], 308-325. 1999.

- Price, A. D. F. and L. Newson. Strategic management: consideration of paradoxes, processes and associated concepts as applied to construction. *ASCE Journal of Management in Engineering* 19[4]. 2003.
- Quinn, J. B. *Strategies for change: Logical incrementalism*. 1980. Homewood, Irwin.
- Regnér, P. Strategy Creation in the Periphery: Inductive versus Deductive Strategy Making. *Journal of Management Studies* 40[1], 57-82. 2003.
- Roberts, N. C. and J. M. Menker. Strategic Management in the Federal Government : Necessary and Sufficient Elements. Rabin, J., Miller, G. J., and Bartley, W. *Handbook of Strategic Management*. 561-594. 2000. New York, Basel, Dekker.
- Schedler, K., A. Collm, and R. Hristova. *Electronic Government Barometer 2006*. 2007. St. Gallen, IDT-HSG.
- Schedler, K. and M. C. Scharf. *Exploring the Interrelations between Electronic Government and the New Public Management*. 2001. St. Gallen, IDT-HSG.
- Schedler, K. and B. Schmidt. Managing the e-government organization. *International Public Management Review* 5[1], 1-20. 2003.
- Schedler, K. and J. P. Siegel. *Strategisches Management in Kommunen*. 2005. Düsseldorf, Hans Böckler Stiftung.
- Schedler, K. and L. Summermatter. Customer orientation in electronic government: Motives and effects. *Government Information Quarterly* 24[2], 291-311. 2007.
- Schedler, K., L. Summermatter, and B. Schmidt. *Managing the Electronic Government: From Vision to Practice*. 2004. Greenwich, CT, Information Age Publishing.
- Schwiering, K. *Electronic Government: Ein Konzept zur innovativen Neugestaltung öffentlicher Aufgabenwahrnehmung*. 2005. Münster, LIT Verlag.
- Steiss, A. W. *Strategic management and organizational decision-making*. 1985. Lexington, MA, D. C. Heath.
- Summermatter, L. *Einflussfaktoren der E-Government Entwicklung*. 2006. Bern, Haupt.
- Van de Ven, A. H. An Assessment of Perspectives on Strategic Change. Zan, L., Zambon, S., and Pettigrew, A. M. *Perspectives of Strategic Change*. 313-323. 1993. Boston et al., Kluwer.
- Vinzant, J. and D. Vinzant. Strategic management and total quality management: challenges and choices. *Public Administration Quarterly* 20[2], 201-219. 1996.

Whittington, R. What is strategy and does it matter? 1993. London, Routledge.

Whittington, R. Completing the Practice Turn in Strategy Research. *Organization Studies* 27[5], 613-634. 2007.

Winter, S. Knowledge and competence as strategic assets. Teece, D. *The Competitive Challenge*. 159-184. 1987. Cambridge, MA, Ballinger.

Zahn, E., S. Foschiani, and M Tilebein. Wissen und Strategiekompetenz als Basis für die Wettbewerbsfähigkeit von Unternehmen. Hammann, P. and Freiling, J. *Die Ressourcen- und Kompetenzperspektive des Strategischen Managements*. 47-68. 2000. Wiesbaden, Gabler.

Zan, L. and S. Zambon. Strategy, Change, and the Strategic Approach: Making Sense in Process. Zan, L., Zambon, S., and Pettigrew, A. M. *Perspectives on Strategic Change*. 1-34. 1992. Boston et al., Kluwer.